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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,183	10/15/2003	Yiduo Zhang	17310-293156	3793

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FAEGRE & BENSON LLP  
PATENT DOCKETING  
2200 WELLS FARGO CENTER  
MINNEAPOLIS, MN 55402

EXAMINER

CAO, ALLEN T

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/686,183

Applicant(s)

ZHANG ET AL.

Examiner

Allen T. Cao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-10,12-14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 3,7,11 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. The IDS filed on 7/5/05 has not been attached with this Office Action. It will be considered and mailed to the Applicant later in the next Office Action.

2. Claims 1-18 are objected to because of the following informalities:

The term "an" in front of the term "arm" in claim 2, line 1; claim 6, line 1; claim 10, line 1; claim 14, line 1; and in claim 18, line 1 should be changed to ~~the~~ or ~~said~~ because "an arm" has been disclosed previously in claims 1, 5, 9 and 13, respectively.

Appropriate correction is required.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4-6, 8-10, 12-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US. 2002/0145830 A1).

Wang et al discloses a baseplate for swaging a disk drive head suspension 14 to an arm 18 having a thickness and a neutral axis, the base plate including a boss tower (12, 13 and 15) having an outer diameter high point configured to be located within about some % of the arm thickness from the neutral axis when swaged to an arm (see figure 2), as set forth in claims 1, 4-5, 8-9, 12-13 and 16-17.

Wang et al does not disclose the percent as set forth being exactly 2% or 4% or 6% as recited in claims 1, 4-5, 8-9, 12-13 and 16-17.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to indicate the percentage as set forth of Wang et al to be exactly 2% or 4% or 6% as recited in claims 1, 4-5, 8-9, 12-13 and 16-17.

The rationale is as follows: One of ordinary skill in the art would have been motivated to indicate the percentage as set forth of Wang et al to be exactly 2% or 4% or 6% as recited in claims 1, 4-5, 8-9, 12-13 and 16-17 through obvious engineer lab routine optimization and experimentation at the time the invention was made to improve the swaging characteristics between the suspension, arm and the base plate in order to improve the balance characteristics of the suspension with respect to the arm, thus improve the read/write characteristics of the head.

Regarding claims 2, 6, 10, 14 and 18, Wang et al discloses that the base plate is swaged to the arm 18 (figure 2).

5. Claims 3, 7, 11 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record neither discloses nor suggests a base plate for swaging a disk drive head suspension to an arm having the limitations as set forth in claims 1 or 5 or 9 or 13 and additional limitations that the base plate is the sole base plate swaged to the arm, as recited in claims 3, 7, 11 and 15, respectively.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen T. Cao whose telephone number is (571) 272-7569. The examiner can normally be reached on Mon - Thurs (7:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Cao  
Primary Examiner

AC  
July 11, 2005